

Tab 7 to Appendix of Exhibits to Motion of Defendant Brush Wellman, Inc. for Summary Judgment:

KOLANZ DEPOSITION EXCERPTS AND CERTAIN EXHIBITS

UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF MASSACHUSETTS

SUZANNE GENEREUX and BARRY *
GENEREUX, wife and husband, *
individually and as parents *
and natural guardians of *
their minor children, *
ANGELA GENEREUX and KRISTA *
GENEREUX, *

Plaintiffs

vs.

AMERICAN BERYLLIA CORP., *
BRUSH WELLMAN, INC., BRUSH *
WELLMAN CERAMICS, INC., *
BRUSH WELLMAN CERAMIC *
PRODUCTS, INC., HARDRIC *
LABORATORIES, INC., KYOCERA *
AMERICA, INC., KYOCERA *
INDUSTRIAL CERAMICS CORP. *

and RAYTHEON COMPANY, *

Defendants *

VIDEOTAPED DEPOSITION OF

MARC EDWARD KOLANZ

June 6, 2006

Case No.

04CV12137JLT

<p style="text-align: right;">Page 70</p> <p>1 media after it came in contact with Brush's BeO 2 product? 3 A. The only correspondence I recall with 4 Raytheon with regard to abrasive blasting was I 5 had sent one or two memos or letters to them 6 discussing --- they had contacted us regarding 7 how to remove metallization to be able to 8 re-use parts. And they were talking about using 9 abrasive blasting to do that. And I sent them a 10 letter back that said I didn't advise that you 11 remove it in that --- not using that method, but 12 to use a chemical removal method of doing it. 13 So I never had a correspondence with them on 14 disposal of abrasive material other than they 15 may well have received this report that would 16 have said that. I don't remember if that was 17 attached to one of those letters or not. 18 Q. What did Brush do to confirm that 19 Raytheon's Waltham operation heeded Brush's 20 advice to use a chemical removal process for the 21 metallization rather than the grit blasting? 22 A. I'm not sure we --- what kind of access 23 we ever had to the production operations. I 24 wasn't involved with the checking up to see if</p>	<p style="text-align: right;">Page 72</p> <p>1 the precise grit blasting or abrasive blasting 2 operation that was in use at Raytheon's Waltham 3 plant during the 1980s? 4 A. I'm not aware that we knew that they 5 were, for sure, using abrasive blasting at the 6 Waltham plant in the 1980s. 7 Q. What effort, if any, was expended by 8 Brush to ascertain whether any abrasive blasting 9 was being undertaken at Raytheon's Waltham plant 10 of Brush's beryllium oxide parts? 11 A. I've not seen any information that 12 would indicate that we had attempted to 13 ascertain what they might have been doing with 14 abrasive blasting at the Waltham facility. 15 Q. Brush in the 1980s was aware of a 16 health risk associated with abrasive blasting of 17 its own beryllium oxide parts; correct? 18 A. I'm aware of those potential health 19 risks, depending on how people might perform the 20 task. 21 Q. Right. And you were aware that Brush 22 was selling quantities of beryllium oxide parts 23 to Raytheon's Waltham facility; correct? 24 A. Say that again, please?</p>
<p style="text-align: right;">Page 71</p> <p>1 they utilized the suggested method or not. It 2 doesn't mean they couldn't use abrasive 3 blasting, just it would take more care. And we 4 weren't here advising against that. If there 5 was a safer method to follow, we thought they 6 should follow the other method. 7 Q. And that safer method that Brush 8 recommended was the use of a chemical removal 9 process; correct? 10 A. Yes. 11 Q. All right. And I'm not, for the 12 moment, asking you, Mr. Kolan, what access, if 13 any, Brush had or didn't have to the plant or 14 the operation. I'm merely asking what, if 15 anything, did Brush do to ascertain whether 16 Raytheon's Waltham facility heeded Brush's 17 advice to employ an alternative removal process 18 for the metallization on the BeO products sold 19 by Brush to Raytheon? 20 A. I don't know if we did anything 21 specifically to ascertain whether they did or 22 did not use the method that we had suggested to 23 them. 24 Q. In fact, what did Brush do to ascertain</p>	<p style="text-align: right;">Page 73</p> <p>1 Q. I'm simply asking you to confirm that 2 BeO parts were sold by Brush to Raytheon during 3 the 1980s at its Waltham plant. 4 A. Yes, Brush Wellman sold BeO parts to 5 the Waltham plant. What they did with the 6 parts, I don't know. 7 Q. Okay. In view of the potential risk 8 associated with the abrasive blasting of those 9 parts, what exactly did Brush do to ascertain if 10 it was, in fact, being abrasively blasted at 11 Waltham during the 1980s? 12 A. I'm not aware that we did anything to 13 ascertain whether they were or were not doing 14 abrasive blasting of our materials at their 15 facility. 16 Q. In view of the known risk to Brush, 17 health risks associated with such blasting, why 18 didn't you ask Raytheon if it was abrasively 19 blasting your product? 20 ATTORNEY FAXON: 21 Object to form. 22 A. Well, we had received a question 23 regarding abrasive blasting, and we gave 24 guidance as to how to do that, what they were</p>

<p style="text-align: right;">Page 106</p> <p>1 The objection ---.</p> <p>2 ATTORNEY HONIK:</p> <p>3 Let me ask the question, then</p> <p>4 you can respond.</p> <p>5 ATTORNEY FAXON:</p> <p>6 Okay.</p> <p>7 ATTORNEY HONIK:</p> <p>8 What is the objection you have</p> <p>9 to the form of the question presently pending?</p> <p>10 ATTORNEY FAXON:</p> <p>11 The question assumes that Brush</p> <p>12 sold beryllium windows to Raytheon for use, and</p> <p>13 I don't recall the witness ever testifying to</p> <p>14 that effect.</p> <p>15 ATTORNEY HONIK:</p> <p>16 Thank you.</p> <p>17 BY ATTORNEY HONIK:</p> <p>18 Q. Can you answer the question?</p> <p>19 A. Can you repeat the question?</p> <p>20 COURT REPORTER READS BACK PREVIOUS QUESTION</p> <p>21 A. I think I said earlier I was not aware</p> <p>22 of what materials would be considered windows,</p> <p>23 so I don't think I can answer your question.</p> <p>24 BY ATTORNEY HONIK:</p>	<p style="text-align: right;">Page 108</p> <p>1 Brush?</p> <p>2 A. I did learn that for example, the</p> <p>3 washers, what are called washers, how those were</p> <p>4 used.</p> <p>5 Q. What did you learn about the use of</p> <p>6 washers?</p> <p>7 A. That washers are used to --- usually as</p> <p>8 a means of allowing electric wire to pass into a</p> <p>9 microwave tube, and that those washers would act</p> <p>10 as both an electrical insulator and a heat</p> <p>11 dissipater ---</p> <p>12 Q. Okay.</p> <p>13 A. --- to allow the entry of a wire into a</p> <p>14 tube.</p> <p>15 Q. What other uses did you learn about?</p> <p>16 A. I also heard of a piece called a</p> <p>17 matchstick, but I can't remember exactly what it</p> <p>18 was used for.</p> <p>19 Q. Okay. And a matchstick is some kind of</p> <p>20 beryllium ceramic shape that looks like a</p> <p>21 matchstick?</p> <p>22 A. Yeah, it's about the size of a</p> <p>23 matchstick.</p> <p>24 Q. Okay. What other uses were made that</p>
<p style="text-align: right;">Page 107</p> <p>1 Q. Prior to coming here today, Mr. Kolan,</p> <p>2 you didn't look at any specifications or</p> <p>3 drawings that revealed to you that Raytheon</p> <p>4 manufactured beryllium oxide windows that were</p> <p>5 sold to Raytheon for use at its Waltham plant in</p> <p>6 the 1980s?</p> <p>7 A. Did you say Raytheon again? You're</p> <p>8 confusing me.</p> <p>9 Q. That Brush sold ---</p> <p>10 A. Brush sold.</p> <p>11 Q. --- to Raytheon for use at its Waltham</p> <p>12 facility?</p> <p>13 A. I didn't see anything that denoted</p> <p>14 windows that I recall in the records I was</p> <p>15 looking at. This stuff typically has size and</p> <p>16 shape and number and that sort of thing.</p> <p>17 Q. Okay. Do you know the use to which</p> <p>18 Raytheon made of any beryllium ceramic parts</p> <p>19 sold to it by Brush during the 1980s?</p> <p>20 A. Say that again, please?</p> <p>21 Q. Prior to coming here today, did you do</p> <p>22 anything to acquaint yourself with the manner in</p> <p>23 which your customer, Raytheon, in the 1980s,</p> <p>24 made use of beryllium oxide parts sold to it by</p>	<p style="text-align: right;">Page 109</p> <p>1 you learned about of Brush's products by</p> <p>2 Raytheon?</p> <p>3 A. That's all I know of that I'm recalling</p> <p>4 at this time, what the materials were used for.</p> <p>5 Q. Did you read Frank Ballance's</p> <p>6 deposition prior to today?</p> <p>7 A. Frank Ballance?</p> <p>8 Q. Yes, sir.</p> <p>9 A. No.</p> <p>10 Q. Okay. Were you shown any exhibits from</p> <p>11 Mr. Ballance's deposition testimony?</p> <p>12 A. No.</p> <p>13 Q. Were you shown photographs or drawings</p> <p>14 of something called a klystron tube?</p> <p>15 A. No.</p> <p>16 Q. Were you shown any drawings that</p> <p>17 related to any of the various tubes that were</p> <p>18 manufactured by Raytheon that employed</p> <p>19 components sold to it by Brush?</p> <p>20 A. No.</p> <p>21 Q. You'd mentioned before to me, Mr.</p> <p>22 Kolan, that you may have looked at some</p> <p>23 documents from this case, as you referred to it.</p> <p>24 Did you read any depositions that were taken</p>

<p style="text-align: right;">Page 126</p> <p>1 safety data sheets.</p> <p>2 Q. And is it true that the only warnings</p> <p>3 that Brush would have given, if any, would have</p> <p>4 been reflected in the MSDS sheets?</p> <p>5 ATTORNEY FAXON:</p> <p>6 Object to form.</p> <p>7 A. No. There are a variety of warnings</p> <p>8 that were given over the years. There are</p> <p>9 warnings on labels that would go with all</p> <p>10 materials that would be shipped to all</p> <p>11 customers, which contained various types of</p> <p>12 warnings. Again, without looking at them, I</p> <p>13 can't be specific as to what all was on the</p> <p>14 warnings for what years. I believe there was</p> <p>15 also some warning information provided in the</p> <p>16 letters that were sent --- that I authored some</p> <p>17 of them --- going to Raytheon Waltham. So that</p> <p>18 would be another source of kind of warnings</p> <p>19 information.</p> <p>20 BY ATTORNEY HONIK:</p> <p>21 Q. What did Brush do to ensure that any</p> <p>22 warnings that might have been given with respect</p> <p>23 to hand filing or similar abrading would have</p> <p>24 reached the employees at the Waltham plant</p>	<p style="text-align: right;">Page 128</p> <p>1 would say it's not typical.</p> <p>2 Q. Apart from Brush's hope or assumption</p> <p>3 or expectation that the communicated information</p> <p>4 would be passed along to the employees, what did</p> <p>5 Brush specifically do to ensure that the</p> <p>6 information that you claimed to have imparted</p> <p>7 was, in fact, given or relayed to the employees</p> <p>8 at the Waltham plant?</p> <p>9 ATTORNEY FAXON:</p> <p>10 Object to form, argumentative.</p> <p>11 A. Brush Wellman, as I said, has to depend</p> <p>12 on providing information to the facility, and</p> <p>13 it's their responsibility to pass that onto</p> <p>14 their workers in whatever way they deem it</p> <p>15 appropriate. I don't know what all Raytheon may</p> <p>16 have done to ascertain beryllium health and</p> <p>17 safety informational needs for its workers</p> <p>18 beyond anything Brush Wellman may have provided</p> <p>19 them.</p> <p>20 BY ATTORNEY HONIK:</p> <p>21 Q. I understand your answer. Did anyone</p> <p>22 at Brush ask anybody in management or health and</p> <p>23 safety at Raytheon during the 1980s in</p> <p>24 connection with the Waltham operation whether</p>
<p style="text-align: right;">Page 127</p> <p>1 during the 1980s?</p> <p>2 A. Well, provided the information to the</p> <p>3 people, such as the health and safety people,</p> <p>4 people making requests, who are required to pass</p> <p>5 along that kind of information. For example,</p> <p>6 under the Hazard Communication Standard, they're</p> <p>7 required to pass that information on to</p> <p>8 employees and provide it to them. I believe</p> <p>9 they also were sent various --- other documents</p> <p>10 that would go to people asking the question</p> <p>11 about health and safety issues, so it'd be</p> <p>12 certainly my expectation that that is making its</p> <p>13 way through to appropriate employees, that</p> <p>14 people would be informed of that kind of</p> <p>15 information.</p> <p>16 But like I said, I've never been to</p> <p>17 that facility, and I know our sales and</p> <p>18 marketing people have been there. It's not</p> <p>19 oftentimes typical for them to be given free</p> <p>20 reign to see a facility, most times due to</p> <p>21 confidentiality issues that people --- they just</p> <p>22 don't typically allow the salespeople to go into</p> <p>23 the facilities in where the employees are</p> <p>24 working. That does happen on occasion, but I</p>	<p style="text-align: right;">Page 129</p> <p>1 it, in fact, was imparting any of the</p> <p>2 information that you claim Brush gave to it</p> <p>3 regarding the health risks associated with</p> <p>4 abrading Brush BeO product?</p> <p>5 A. I'm not aware that a question like</p> <p>6 that was asked. I don't know that it was or</p> <p>7 wasn't. I'm not aware of any type of question</p> <p>8 like that being asked.</p> <p>9 Q. Can you tell me why Brush didn't ask</p> <p>10 such a question?</p> <p>11 ATTORNEY FAXON:</p> <p>12 Object to form.</p> <p>13 A. Because we don't have contact with the</p> <p>14 workers directly. We only have contact with the</p> <p>15 management of the facility, and we provide them</p> <p>16 relevant health and safety information, both</p> <p>17 prior to it being required under the Hazard</p> <p>18 Communication Standard, and after that. And by</p> <p>19 law, they are required to pass on relevant</p> <p>20 information to the workers, and in fact, train</p> <p>21 workers under the Hazard Communication Standard.</p> <p>22 BY ATTORNEY HONIK:</p> <p>23 Q. That's precisely my question, Mr.</p> <p>24 Kolanz. Did anyone at Brush ask any manager of</p>

<p style="text-align: right;">Page 134</p> <p>1 was supposed to go to a specific place in 2 Raytheon. And there was reference to that, I 3 believe, also in some of the procedures that I 4 had read that indicated they did that because 5 these parts might contain some dust on them when 6 they handled parts, so they wanted to make sure 7 they were having them opened by a knowledgeable 8 person. 9 ATTORNEY HONIK: 10 Mark that as Kolanz One, 11 please. 12 (Kolanz Exhibit One marked for identification.) 13 BY ATTORNEY HONIK: 14 Q. Mr. Kolanz, I've placed in front of you 15 the exhibit marked One now. Do you recognize 16 that? 17 A. Yes. 18 Q. And it's been previously Bates stamped 19 Brush Wellman Genereux 01274. Do you recognize 20 this as the label that Raytheon asked Brush to 21 affix to beryllia ceramics that it sold to the 22 Waltham facility in the 1980s? 23 A. Yes, that's my understanding. 24 Q. Would you agree that this is not a</p>	<p style="text-align: right;">Page 136</p> <p>1 directing someone's attention to content, would 2 you agree that Exhibit One is an inadequate 3 warning label from the standpoint of what Brush 4 knows from an industrial hygiene and safety 5 standpoint for its BeO product? 6 ATTORNEY FAXON: 7 Object to form. 8 A. Well, I guess I would say I wouldn't 9 consider it a product warning label. 10 BY ATTORNEY HONIK: 11 Q. Thank you. Would you consider any of 12 the language reflected on Exhibit One as an 13 adequate product warning label, such that Brush 14 would use it to accompany it or affix it to its 15 BeO ceramic? 16 A. Brush Wellman wouldn't use it as a 17 warning label because we had our own warning 18 label that went with each package. 19 Q. And do you agree in terms of the 20 content of the warning label that Brush used in 21 contrast to Exhibit One, that Exhibit One does 22 not have adequate language in it to 23 appropriately and adequately warn as far as 24 Brush was concerned?</p>
<p style="text-align: right;">Page 135</p> <p>1 warnings label? 2 ATTORNEY FAXON: 3 Object to the extent it calls 4 for a legal conclusion. 5 A. Yes, it's a warning label in some 6 regard as to just directing as to where this 7 material might go. It does say caution on it, 8 so it would be unusual to not have the word 9 caution on some kind of a warning label. 10 Usually that's the type of term --- that is a 11 standardized term for use on warning labels. So 12 it's kind of a directive label of some sort, but 13 I don't --- it's hard to define it as a warning 14 label, but it's hard to say it's not providing 15 some cautionary information, knowing how they 16 were using this based on my reading of the 17 document that says they wanted to make sure that 18 persons who were knowledgeable of BeO would open 19 this package. So that was the purpose of it. 20 So in that respect, it would be kind of a 21 warning label. So it doesn't allow someone on a 22 shipping dock to just simply open the package. 23 BY ATTORNEY HONIK: 24 Q. Apart from its function as a label</p>	<p style="text-align: right;">Page 137</p> <p>1 A. Well, I wouldn't deem this a product 2 warning label. 3 Q. Okay. And therefore, no language on it 4 or combination of language on Exhibit One could 5 suffice as a product warning that Brush would 6 ever use on its beryllium ceramic; correct? 7 A. That Brush Wellman would use as a 8 warning label? 9 Q. Yes. 10 A. Well, I believe we use the term caution 11 on some of our warning labels, so that is a 12 similarity, but that is about the only 13 similarity. 14 Q. And is it true that Brush didn't intend 15 for the Raytheon label marked Kolanz One now to 16 serve as a product warning on Brush's product? 17 A. No, we did not ---. 18 ATTORNEY FAXON: 19 Object to form. 20 A. We did not intend that that label would 21 serve as our product warning on any materials we 22 shipped to Raytheon. 23 BY ATTORNEY HONIK: 24 Q. Fair enough. And in fact, Brush was</p>

<p style="text-align: right;">Page 138</p> <p>1 aware that Exhibit One would not necessarily</p> <p>2 stay with this product so that its end user</p> <p>3 would see it; correct?</p> <p>4 A. I don't know that to be the case.</p> <p>5 Q. Now, the product warning label that was</p> <p>6 used by Brush on its beryllium ceramics sold to</p> <p>7 Raytheon in the 1980s, did that change over</p> <p>8 time?</p> <p>9 A. Yes. It has changed over time based on</p> <p>10 our knowledge and on advice of the warnings</p> <p>11 experts over the years.</p> <p>12 Q. You had told me earlier, Mr. Kolanz,</p> <p>13 that prior to 1985, you couldn't tell me with</p> <p>14 any degree of certainty whether the MSDS sheets</p> <p>15 that were used for beryllium ceramic necessarily</p> <p>16 accompanied the sale of such ceramics to</p> <p>17 Raytheon before 1985; is that correct?</p> <p>18 ATTORNEY FAXON:</p> <p>19 Object to form,</p> <p>20 mischaracterized his testimony.</p> <p>21 A. You said that the MSDS would accompany</p> <p>22 the part?</p> <p>23 BY ATTORNEY HONIK:</p> <p>24 Q. You couldn't tell me, could you,</p>	<p style="text-align: right;">Page 140</p> <p>1 occasion, to check into the shipping department</p> <p>2 and make sure they have the proper labels in</p> <p>3 place, they had the current labels, and that</p> <p>4 upon inquiry of people there, that they were</p> <p>5 being used.</p> <p>6 Q. Do you know what the label that was in</p> <p>7 use prior to 1985 on beryllium ceramic looked</p> <p>8 like?</p> <p>9 A. I have some idea of it, but it would be</p> <p>10 hard to describe it without a copy of it here.</p> <p>11 Q. Well, did you look at it prior to</p> <p>12 coming here today?</p> <p>13 A. The pre-'85 label?</p> <p>14 Q. Yes.</p> <p>15 A. At some point in the past I've looked</p> <p>16 at it, not recently.</p> <p>17 ATTORNEY HONIK:</p> <p>18 May we have this marked as Two?</p> <p>19 (Kolanz Exhibit Two marked for identification.)</p> <p>20 BY ATTORNEY HONIK:</p> <p>21 Q. Mr. Kolanz, this document now marked</p> <p>22 Two, do you recognize it?</p> <p>23 A. I recognize it as one of Brush</p> <p>24 Wellman's product warning labels.</p>
<p style="text-align: right;">Page 139</p> <p>1 whether Brush sent MSDS sheets with each and</p> <p>2 every beryllium ceramic part that it sold to</p> <p>3 Raytheon prior to 1985; can you?</p> <p>4 A. No, I can't tell you that, and I don't</p> <p>5 think you asked me that specific question</p> <p>6 earlier.</p> <p>7 Q. Well, I have now, and the answer is you</p> <p>8 can't tell me; can you?</p> <p>9 A. Right. What we did include is warning</p> <p>10 --- our warning labels on each and every package</p> <p>11 that was sent.</p> <p>12 Q. How do you know that?</p> <p>13 A. Because that has been the practice</p> <p>14 within Brush Wellman for ---since the '50s, the</p> <p>15 early '50s. And that's something that I would,</p> <p>16 at times, check on myself, to make sure that</p> <p>17 people were following that direction, making</p> <p>18 sure they're using the right labels and such.</p> <p>19 Q. What would you do to satisfy yourself</p> <p>20 that those warning labels accompanies the</p> <p>21 products containing BeO that were sold to</p> <p>22 Raytheon's Waltham facility prior to 1985?</p> <p>23 A. Typically, when I would visit a</p> <p>24 facility or area, I would make it a practice on</p>	<p style="text-align: right;">Page 141</p> <p>1 Q. Okay. And when was this product</p> <p>2 warning label in use by Brush?</p> <p>3 A. I'm not specifically sure when this</p> <p>4 version of the label was put into use by Brush.</p> <p>5 I'd have to go back and check and compare as to</p> <p>6 when that might have been to be able to</p> <p>7 determine when this version was put into use.</p> <p>8 Q. Was it ever the case that you would put</p> <p>9 the revision or revised date on the labels</p> <p>10 themselves so that one could know when the label</p> <p>11 came into use?</p> <p>12 A. I don't recall that we ever did that,</p> <p>13 because we usually made a big deal out of making</p> <p>14 sure we captured back all the old labels and got</p> <p>15 facilities to get rid of those labels, and then</p> <p>16 gave them the new labels. So I'd have to look -</p> <p>17 --. I don't recall us putting a date on the</p> <p>18 warning labels.</p> <p>19 Q. Well, looking at Kolanz Two and the</p> <p>20 language that's reflected there, can you tell me</p> <p>21 whether or not the language employed in this</p> <p>22 label was identical or similar in any respect to</p> <p>23 the one you used prior to 1985?</p> <p>24 A. I don't specifically recall. I'd have</p>

<p style="text-align: right;">Page 158</p> <p>1 Three is a representation by Brush of the safety 2 of that standard; is it not? 3 ATTORNEY FAXON: 4 Object to form. 5 A. It's certainly represented --- a 6 representation of what the standard is. I mean, 7 that's a compliant standard. 8 BY ATTORNEY HONIK: 9 Q. And the compliant standard was 10 specifically chosen to be reflected in Kolan 11 Three, which is Brush's warning label, because 12 Brush had a belief that that was a safe exposure 13 standard; correct? 14 A. Yes, that's correct. We believed that 15 that standard did provide a safe margin of 16 safety based on our own history, experience and 17 our review of literature. 18 Q. Okay. And because you believed 19 Raytheon to be sophisticated, did you believe 20 that their sophistication extended to a 21 knowledge and recognition of the two microgram 22 OSHA standard as being safe? 23 ATTORNEY FAXON: 24 Object to form.</p>	<p style="text-align: right;">Page 160</p> <p>1 A. Yes. 2 Q. And so you believed that the mere 3 imparting of accurate and known information by 4 Brush, in this case to its customer, Raytheon, 5 would allow Raytheon to make appropriate choices 6 for the health and safety of its employees when 7 they were working with Brush product; correct? 8 ATTORNEY FAXON: 9 May I have that read back, 10 please? 11 COURT REPORTER READS BACK PREVIOUS QUESTION 12 ATTORNEY FAXON: 13 Object to form. 14 A. I'm not sure I understand the question. 15 BY ATTORNEY HONIK: 16 Q. But that's actually not the question as 17 I phrased it, so I'll try again; okay? In 18 employing the warnings language that we've been 19 looking at, and specifically in Kolan Three, is 20 it correct that Brush was attempting to inform 21 its customers, in this case, Raytheon, about 22 appropriate standards so that it, in turn, could 23 make judgments about how best to protect their 24 own employees when they were using Brush</p>
<p style="text-align: right;">Page 159</p> <p>1 A. I guess I don't know how I would know 2 what they would believe was --- what their 3 opinion was of the two microgram standard. 4 BY ATTORNEY HONIK: 5 Q. Let me ask you this. You had a belief, 6 did you not, that companies like Raytheon 7 employed their own industrial hygienists; 8 correct? 9 A. Yes. 10 Q. And you've already told me on the basis 11 of certain documents that you looked at, that 12 you believed Raytheon had at least some level of 13 sophistication based on the detail of their 14 beryllium handling procedures and other 15 documents that you looked at; correct? 16 A. Yes. 17 Q. And I gather you shared that with me 18 out of a belief that Raytheon could make some 19 degree of independent judgment about how best to 20 protect their own employees; correct? 21 A. It appears that they were making 22 independent judgments of how to protect their 23 employees. 24 Q. That's how it appeared to you; correct?</p>	<p style="text-align: right;">Page 161</p> <p>1 products? 2 A. Yes. And we would --- as it says on 3 the bottom of these labels, we also would offer 4 assistance if they wanted in establishing safe 5 procedures by contacting Brush Wellman. So if 6 they felt they needed help in doing something, 7 that we were ready to help our customers. 8 Q. And part of the representation and 9 information imparted in Kolan Three to 10 customers like Raytheon who purchased beryllium 11 ceramic from Brush, was that the two microgram 12 standard was safe; correct? 13 ATTORNEY FAXON: 14 Object to form. 15 A. Well, we were imparting in here that 16 that is the Occupational Safety and Health 17 Administration mandatory limit. In other words, 18 there's a legal reason that they need to comply 19 with this number. 20 BY ATTORNEY HONIK: 21 Q. But more than that, Mr. Kolan, there 22 was information reflected here and in other 23 material, wouldn't you agree, that reinforced 24 and reconfirmed to customers like Raytheon that</p>

<p style="text-align: right;">Page 162</p> <p>1 the two microgram standard was a safe standard 2 for Raytheon's employees; correct? 3 ATTORNEY FAXON: 4 Object to form. 5 A. I'm not sure what you mean about --- we 6 looked at it here. 7 BY ATTORNEY HONIK: 8 Q. Brush sent letters and other literature 9 and material to Raytheon, among other customers, 10 that reconfirmed the safety of the two microgram 11 standard; did it not? 12 A. We had shared our experience with the 13 two microgram standard and stated that we 14 believe that standard is safe and that our 15 experience with that standard has shown it to be 16 protective and preventative of chronic beryllium 17 disease. 18 Q. Precisely. And you did so in the case 19 of Raytheon, like other customers who purchased 20 beryllium ceramic throughout the 1980s; did you 21 not? 22 A. I believe we made statements like that 23 on and off throughout the 1980s. 24 Q. And you knew such statements would be,</p>	<p style="text-align: right;">Page 164</p> <p>1 reasonably well-informed on the beryllium --- on 2 the health and safety aspects of handling our 3 products. 4 Q. And I don't want to make too fine a 5 point about this, but it's because Brush was 6 aware that the ultimate responsibility, if you 7 will, was for proper industrial hygiene practice 8 and procedure to be executed by the employers to 9 whom you were imparting this information; 10 correct? 11 ATTORNEY FAXON: 12 Object to form. Object to the 13 extent it's outside the notice. 14 BY ATTORNEY HONIK: 15 Q. Do you understand the question? 16 A. I'm not sure I do. 17 Q. Okay. Let me get at it a little more 18 simply. Brush couldn't go into the Waltham 19 plant and employ its own sensibility in 20 execution of industrial hygiene because you 21 didn't operate the plant; correct? 22 A. That's correct. 23 Q. You knew that it was being left to 24 Raytheon to make the judgments about how to</p>
<p style="text-align: right;">Page 163</p> <p>1 at least in part, weighed and incorporated by 2 your customers in formulating their own health 3 and safety policies for their employees; 4 correct? 5 A. Well, I believe our customers could 6 trust that Brush Wellman was accurately relaying 7 its experience with the two microgram standard 8 and its review of the relevant scientific 9 literature. 10 Q. And you knew that your customers would 11 rely upon those representations; did you not? 12 ATTORNEY FAXON: 13 Object to form and foundation. 14 A. Well, I'm not sure what all they might 15 have relied upon. They could certainly take 16 what we had given them as an accurate 17 representation of Brush Wellman's experience 18 with the occupational standard. 19 BY ATTORNEY HONIK: 20 Q. Did Brush want its customers to be as 21 well-informed as could reasonably be for the 22 customer to ultimately make the best judgment 23 about what was safe for their employees? 24 A. Of course we wanted them to be</p>	<p style="text-align: right;">Page 165</p> <p>1 protect its own employees; correct? 2 A. That's correct. 3 Q. And Brush was imparting some knowledge, 4 in this case, significant knowledge about its 5 own products that it was selling to Raytheon; 6 correct? 7 A. Significant health and safety 8 --- beryllium health and safety knowledge, yes. 9 Q. But that ultimately, Raytheon had to 10 make the judgment about how best to protect 11 their own employees; correct? 12 A. That is correct. Then we would offer 13 assistance if they would ask. 14 Q. So can you explain to me why it is that 15 Brush didn't tell Raytheon that it was aware of 16 literature that reported an incidence of disease 17 at levels below two micrograms? 18 ATTORNEY FAXON: 19 Object to form. 20 A. What literature are you referring to? 21 BY ATTORNEY HONIK: 22 Q. Are you on --- is Brush unaware of 23 literature that was generated by Dr. Shima in 24 Japan?</p>

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1 our warning experts warn us about putting too
 2 much information on a warning label, because
 3 that's not the appropriate place. You're
 4 supposed to convey the primary warnings
 5 associated with the material. In some instances
 6 in the past, we've actually taken stuff off of
 7 our warning labels at the advice of a warnings
 8 expert.
 9 Q. What warnings experts has Brush used --
 10 - or did it use in the 1980s with respect to its
 11 beryllia ceramic and metallized beryllia
 12 ceramic?
 13 A. I really don't remember the names.
 14 Q. Are they to be found somewhere in
 15 Brush's records?
 16 A. In the '80s, I wasn't involved with
 17 dealing with the warnings expert myself
 18 directly. That would have been handled by
 19 others. It was later on that I dealt with
 20 dealing with warnings experts directly. And
 21 there was, I know, one woman who came out of
 22 Texas, and then I can't remember where the other
 23 one ---. There's only been two that I know of
 24 since that time that I have dealt with.

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1 Q. Do you know why, Mr. Kolanz, in Kolanz
 2 Two, the warning label for the metallized
 3 beryllia ceramic that you've told us was in use
 4 from '85 forward, the label references the use
 5 of ventilation and other controls, but not
 6 specifically clothing --- protective clothing?
 7 A. In Two?
 8 Q. Yes, sir.
 9 A. This is the pre-'85?
 10 Q. Well, you can correct me, but I thought
 11 you had identified this as the post-'85, and the
 12 generic beryllium product one, marked Three, as
 13 the
 14 pre-'85.
 15 A. Yes.
 16 Q. Is that correct?
 17 A. (Indicates yes.)
 18 Q. So the question is why, in the post-'85
 19 warning label, did Brush elect to make specific
 20 reference to controls involving exhaust
 21 ventilation and other controls designed to meet
 22 OSHA's standards, but no specific reference to
 23 protective clothing?
 24 A. In the post-'85 one?

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1 Q. Yes, sir.
 2 A. Again, this was at the advice of the
 3 warnings expert, as I recollect that, to stick
 4 with the primary warnings. If you notice at the
 5 bottom, we have the statement to say, see
 6 material safety data sheets on file with your
 7 employer for further details concerning OSHA
 8 standards and precautionary measures. So you
 9 had a place where people could go to get more
 10 detailed information, and the label instructed
 11 people to go there.
 12 Q. What did Brush do after preparation and
 13 dissemination of Kolanz 5A, the '85 MSDS sheet,
 14 to ensure that purchasers of its beryllium oxide
 15 were, in fact, providing full-body protective
 16 clothing that was to be specially laundered?
 17 A. That is a situation that needed to be
 18 evaluated by whoever was receiving this
 19 material. Could there be instances where it may
 20 or may not apply? And with a place like
 21 Raytheon, they were certainly --- showed the
 22 expertise to be capable of making that kind of
 23 decision.
 24 Q. Well, did Raytheon --- excuse me, did

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1 Brush ever verify whether, in fact, protective
 2 clothing was ever used at the Waltham facility
 3 in connection with the machining of beryllium
 4 oxide?
 5 A. I'm not aware that we would ever verify
 6 that. I'm not aware that we were ever even
 7 allowed into the facility to see their
 8 operations. I was not able to determine that in
 9 any of the questioning that I've given to other
 10 people, and I know I haven't been there.
 11 Q. Well, putting aside seeing it, did
 12 anyone at Brush ever ask anyone at Raytheon
 13 whether they employed special clothing or
 14 provided special full-body protective clothing,
 15 sealed the clothing --- contaminated clothing,
 16 and then specially laundered it? Did you so
 17 much as ask?
 18 A. I didn't ask because I didn't even know
 19 if they had a situation that would have required
 20 it. That's why it would explain this type of
 21 stuff in the material safety data sheet. And as
 22 I said before, I always invite people. I
 23 believe the MSDS does it, also. It says,
 24 assistance in establishing safe procedures may

<p style="text-align: right;">Page 222</p> <p>1 be obtained by contacting Brush Wellman, 2 Incorporated, environmental control department, 3 it gives an address that they can write to and a 4 phone number they can call. 5 Q. Well, surely Brush was aware that 6 Raytheon was sandblasting or grit blasting the 7 beryllium oxide; wasn't it? 8 A. All I know is that they had sent --- 9 had called with a question asking about that, 10 and I had advised them to use a chemical method. 11 Other than that, I don't know. 12 Q. You don't know? You've never seen any 13 document that suggested to Brush, indeed, to 14 you, that Raytheon was routinely sandblasting 15 beryllium oxide sent to it, sold to it by Brush? 16 ATTORNEY FAXON: 17 Object to form and foundation. 18 A. I don't know that they were abrasive 19 blasting Brush Wellman's products. I just read 20 parts of the deposition of Mrs. Genereux, which 21 referred to sandblasting or abrasive blasting of 22 aluminum oxide, and also the other woman also 23 referred to performing the same type of task to 24 do --- I believe they described it as</p>	<p style="text-align: right;">Page 224</p> <p>1 whether they had adequate local exhaust. As you 2 said earlier, we weren't in running or managing 3 their operation. 4 Q. Well, did you so much as ask them if 5 they were employing ventilation? 6 A. Other than the correspondence we had, I 7 don't know that we had any specific information 8 as to the way they processed their material. 9 Q. I haven't asked you that. I asked you 10 if you asked Raytheon if they employed local 11 exhaust ventilation in connection with any 12 operations in which they machined, ground, 13 trimmed, sandblasted, chemically etched or 14 otherwise abraded Brush's BeO product? 15 ATTORNEY FAXON: 16 Object to form and foundation. 17 A. I don't recall, without going back and 18 reviewing, the letters that I had back and forth 19 --- or that I sent to them whether or not 20 there's anything in those letters that would 21 indicate whether I would have asked them that 22 type of question. I may have. I don't know. 23 BY ATTORNEY HONIK: 24 Q. What did Brush mean in its MSDS sheet</p>
<p style="text-align: right;">Page 223</p> <p>1 metallization. But prior to that time, no. 2 BY ATTORNEY HONIK: 3 Q. If you look at section eight of the 4 same exhibit, 5A, the '85 MSDS sheet, this talks 5 about needing to provide adequate local exhaust 6 ventilation when performing operations such as 7 machining, grinding, laser trimming, 8 sandblasting, chemical etching, et cetera, where 9 respirable dust, mists or fumes are generated; 10 did I read that correctly? 11 A. Yes. 12 Q. What did Brush do to ensure that 13 adequate local exhaust ventilation was being 14 employed by Raytheon at its Waltham plant in 15 connection with any of the processes that we 16 just looked at together in section eight of the 17 1985 MSDS sheet? 18 A. We instructed them via the MSDS that 19 they needed to provide adequate local exhaust 20 ventilation if they are performing those types 21 of activities. 22 Q. What did Brush do to ensure that 23 adequate local exhaust was being used? 24 A. We didn't have any means to determine</p>	<p style="text-align: right;">Page 225</p> <p>1 when it used the term, to provide adequate local 2 exhaust ventilation? 3 A. Well, providing adequate local exhaust 4 ventilation would be to be in compliance --- the 5 idea there is to identify the types of 6 operations that would require local exhaust 7 ventilation, give examples of them, and that 8 those are the types of operations that they 9 should be looking at with regard to potentials 10 for exposure. And of course, you have the OSHA 11 exposure standard then, which would have to be 12 met utilizing adequate local exhaust ventilation 13 or whatever means they choose to control, 14 because you can choose to control things in a 15 variety of ways. For example, you mentioned 16 earlier the filing of a disc on the edge. That 17 could be controlled by using local exhaust 18 ventilation. It could be done by doing the task 19 underwater and cleanly rinsing the parts. So 20 there's different ways to accomplish the same 21 thing. I usually like to see people use the 22 simpler way to do it, is what I typically 23 recommended in the past. 24 Q. What does the term adequate mean in the</p>

<p style="text-align: right;">Page 306</p> <p>1 what information you gave to them regarding 2 health and safety of beryllium? 3 A. No, that really didn't affect the type 4 of information that we would provide. 5 Q. So did you give them less information 6 or provide them with less information because 7 they were a sophisticated user? 8 A. No, I wouldn't say that. We would 9 provide information based on what they would 10 request. Certainly a smaller user, a less 11 sophisticated customer tends to ask more 12 questions because they want some help, and 13 that's where we would provide more help. If 14 they tended not to do that, we would provide 15 initial information with the offer of providing 16 more afterwards, and they typically did not come 17 back asking for more assistance because, from my 18 estimation, they would pretty much know what to 19 do with it since they had industrial hygiene 20 staff. 21 Q. So the follow-up questions that they 22 never asked after you provided all of the 23 initial information, did that give you the 24 impression that Raytheon knew how to protect its</p>	<p style="text-align: right;">Page 308</p> <p>1 Q. What impression ---? 2 A. It would be a procedure, certainly, if 3 they're requiring us to do something. 4 Q. What impression did that requirement to 5 put that little label on from Raytheon give 6 Brush Wellman regarding Raytheon's knowledge of 7 the beryllia hazards? 8 ATTORNEY HONIK: 9 bjection, form, calls for 10 conjecture. 11 A. Well, certainly, that kind of 12 requirement to have a caution, to have something 13 specific --- to have a label specifically put on 14 by a customer, I would say is highly unusual. 15 That did not happen very often. So again, that 16 would not be a typical procedure. They were 17 trying to make sure it went to a specific group 18 or person within their organization. Again, 19 that is not --- that's a rarity in what I've 20 seen as far as purchase orders. 21 ATTORNEY HANNEKE: 22 Okay. I don't have anything 23 further. 24 ATTORNEY HONIK:</p>
<p style="text-align: right;">Page 307</p> <p>1 workers from beryllia hazards? 2 ATTORNEY HONIK: 3 Objection, calls for conjecture 4 and speculation on the witness' part. 5 A. Well, certainly in looking at their 6 procedure and protocols that they wrote up for 7 beryllium, certainly I would say that they had a 8 greater than typical knowledge of beryllium 9 health and safety, or be on the high end of that 10 understanding compared to other 11 ---. And that's why I would refer to them as 12 more of a sophisticated user. 13 BY ATTORNEY HANNEKE: 14 Q. Were their procedures and protocols 15 produced to you as part of 16 --- or to Brush Wellman as part of the plans and 17 specifications? 18 A. Not that I'm aware of. The first time 19 I saw them was associated with reviewing 20 materials for this, other than the fact that 21 their little caution label was on past purchase 22 orders. It would be listed right on Brush 23 Wellman's purchase orders that we were to put 24 that on material being shipped to them.</p>	<p style="text-align: right;">Page 309</p> <p>1 A couple follow-up, if I may, 2 and then we'll conclude for today. 3 ATTORNEY FAXON: 4 Well, I have a few questions 5 after that. 6 ATTORNEY HONIK: 7 Okay. 8 RE-EXAMINATION 9 BY ATTORNEY HONIK: 10 Q. Mr. Kolanz, it's been a long day, but 11 we've looked at MSDS sheets and labels. Do you 12 know of any other warnings or cautions, either 13 in the form of labels or MSDS sheets, that 14 accompanied any sale of beryllia from Brush to 15 Raytheon? 16 A. I'm not sure what you mean by 17 accompanying the sale. Shipped with the 18 product? 19 Q. Correct. 20 A. No. We would only have our labels, 21 typically, that go with it, and material safety 22 data sheets, with the advent of the Hazard 23 Communication Standard, were typically sent with 24 the first --- the protocol was to send the MSDS</p>

<p style="text-align: right;">Page 314</p> <p>1 they said.</p> <p>2 VIDEOGRAPHER:</p> <p>3 5:35 p.m., off record.</p> <p>4 OFF VIDEO</p> <p>5 SHORT BREAK TAKEN</p> <p>6 ON VIDEO</p> <p>7 VIDEOGRAPHER:</p> <p>8 5:37 p.m., back on record.</p> <p>9 BY ATTORNEY FAXON:</p> <p>10 Q. Mr. Kolanz, you were asked some</p> <p>11 questions today about CBD, both today and in the</p> <p>12 1980s. How, if at all, have the diagnostic</p> <p>13 criteria for chronic beryllium disease changed</p> <p>14 since the 1980s?</p> <p>15 ATTORNEY HONIK:</p> <p>16 Objection, calls for an expert</p> <p>17 opinion this witness is incompetent to give.</p> <p>18 A. The difference in diagnostic criteria</p> <p>19 started to change in about 1989 as part of a</p> <p>20 study conducted by K. Kreiss, where she proposed</p> <p>21 the concept of a subclinical form of CBD. Prior</p> <p>22 to that time, CBD was defined mostly upon</p> <p>23 persons who were experiencing clinical symptoms</p> <p>24 of a health effect, which could include cough</p>	<p style="text-align: right;">Page 316</p> <p>1</p> <p>2 A. In general, using the new diagnostic</p> <p>3 criteria, the prevalence of CBD has gone up</p> <p>4 sharply when you go to include subclinical cases</p> <p>5 of chronic beryllium disease.</p> <p>6 BY ATTORNEY FAXON:</p> <p>7 Q. Are statements about the incidence of</p> <p>8 chronic beryllium disease from the 1980s then</p> <p>9 comparable to statements about the incidence of</p> <p>10 chronic beryllium disease today?</p> <p>11 ATTORNEY HONIK:</p> <p>12 Same objection.</p> <p>13 A. Not typically, because most of the</p> <p>14 studies in the '80s would be only looking at</p> <p>15 clinical chronic beryllium disease, where the</p> <p>16 vast majority of the studies in the 1990s and</p> <p>17 beyond include subclinical CBD, oftentimes not</p> <p>18 even describe the subclinical CBD in with any</p> <p>19 clinical cases of CBD.</p> <p>20 BY ATTORNEY FAXON:</p> <p>21 Q. Mr. Kolanz, earlier today, you</p> <p>22 described Raytheon as sophisticated. Why did</p> <p>23 you describe Raytheon as sophisticated?</p> <p>24 A. That was based primarily on looking at</p>
<p style="text-align: right;">Page 315</p> <p>1 and loss of weight, and could be discernable</p> <p>2 changes in</p> <p>3 x-ray, or pulmonary function changes along with</p> <p>4 a confirmed exposure to beryllium.</p> <p>5 After the years subsequent to '89, the</p> <p>6 criteria for defining chronic beryllium disease</p> <p>7 and the creation of, kind of the term</p> <p>8 subclinical disease, started including --- or</p> <p>9 included persons who would be found to have</p> <p>10 granuloma in their lung. And actually, it's ---</p> <p>11 well, it's a type of granuloma in the lung that</p> <p>12 would be found upon biopsy along with a finding</p> <p>13 of beryllium sensitized based on either a blood</p> <p>14 test or a lung fluid test.</p> <p>15 BY ATTORNEY FAXON:</p> <p>16 Q. How, if at all, have the change in</p> <p>17 diagnostic criteria that you've just described</p> <p>18 affected the rate of instance of chronic</p> <p>19 beryllium disease that you have seen in Brush</p> <p>20 Wellman's plants?</p> <p>21 ATTORNEY HONIK:</p> <p>22 Object to the form of the</p> <p>23 question and to the extent that this calls for</p> <p>24 an opinion outside of this witness' competency.</p>	<p style="text-align: right;">Page 317</p> <p>1 the types of documents they were producing,</p> <p>2 which indicated some real expertise in health</p> <p>3 and safety, and the procedures that they had</p> <p>4 created for beryllium, in addition to their ---</p> <p>5 even their use of that little caution label, to</p> <p>6 me, was well above and beyond the typical</p> <p>7 company. And they were an aerospace company,</p> <p>8 which aerospace companies tended to be moreso</p> <p>9 leaders in health and safety practices and</p> <p>10 procedures overall. They were oftentimes very</p> <p>11 much like some other high-end, very</p> <p>12 sophisticated health and safety groups.</p> <p>13 Q. When you were dealing with Raytheon in</p> <p>14 the 1980s, did you develop a belief as to</p> <p>15 whether or not they were sophisticated?</p> <p>16 A. Yes, I believe I had some reason to</p> <p>17 believe they were sophisticated then, simply</p> <p>18 because they had industrial hygienists on staff,</p> <p>19 plus I was getting questions from people that</p> <p>20 were, like, engineers that worked for Raytheon,</p> <p>21 and that isn't always typical to get it from</p> <p>22 actually kind of production-related personnel.</p> <p>23 So that shows to me a greater understanding of</p> <p>24 health and safety by non-health and safety</p>

<p style="text-align: right;">Page 318</p> <p>1 personnel at the Raytheon company. 2 Q. Did you form a belief in the 1980s as 3 to whether or not Raytheon was likely to pass 4 industrial hygiene information about beryllium 5 or health and safety information about beryllium 6 on to its production workers? 7 ATTORNEY HONIK: 8 Object to form. 9 A. Well, I would certainly expect, with 10 the type of company it appeared to be, that 11 training --- and plus it is required by Hazard 12 Communication Standard that they pass on 13 information, so I certainly would have expected 14 them to have done that and passed it on to 15 employees. And I believe there were some --- 16 records of some kind of beryllium training, but 17 I don't remember the time frame in which those 18 were conducted. 19 BY ATTORNEY FAXON: 20 Q. Mr. Kolanz, Mr. Honik asked you a 21 number of questions that were essentially, why 22 didn't you put X or why didn't you put Y on the 23 product beryllium warning label. Why didn't you 24 put the statements that Mr. Honik asked you</p>	<p style="text-align: right;">Page 320</p> <p>1 in the 1980s warn of inhalation of beryllium 2 particulate? 3 A. I believe they did. 4 Q. You were asked some questions about 5 Exhibit Eight, if you have that before you, sir. 6 I believe you have it right in front of you, 7 sir. 8 A. Oh. 9 Q. Does that document deal with beryllium 10 oxide? 11 A. No. This document refers to beryllium 12 metal. 13 Q. You were asked some questions about 14 Exhibits Kolanz 15 and Kolanz 17, two letters 15 from 1989. In the course of your 16 responsibilities at Brush, did you review those 17 letters at or about the time that they were sent 18 to customers? 19 A. Did I review these letters? 20 Q. Yes. 21 A. I actually don't recall if I did or did 22 not review these. It would not be unusual for 23 me to not have reviewed something like that 24 during that time frame.</p>
<p style="text-align: right;">Page 319</p> <p>1 about on the beryllium warning label? 2 ATTORNEY HONIK: 3 Object to the form of the 4 question. 5 A. The types of specifics that Mr. Honik 6 had mentioned are something that ---. A warning 7 label is designed to be a primary means of 8 giving warning to the recipient of the label. 9 And we were advised by our warning experts that 10 you shouldn't be including a lot of specifics in 11 there, and you had to try to provide a means for 12 getting those specifics in another venue. So 13 you stick to the very primary warnings so the 14 initial recipient of the label understands the 15 basic message, and it isn't confused by other 16 information that's provided. 17 BY ATTORNEY FAXON: 18 Q. And what is the primary hazard 19 associated with beryllium oxide? 20 A. The primary hazard would be the 21 inhalation of beryllium oxide particulate, 22 having the potential to cause serious chronic 23 lung disease. 24 Q. Did Brush's warning labels to Raytheon</p>	<p style="text-align: right;">Page 321</p> <p>1 Q. Did you have an opportunity to review 2 them today at the deposition? 3 A. Yes. 4 Q. Were there any statements in either of 5 the two letters that you felt were inaccurate as 6 of 1989? 7 A. No. I don't think there's anything in 8 here that was really inaccurate. I might choose 9 to word them differently, but I'm not sure how I 10 might have chosen to word them differently in 11 1989 versus today. 12 Q. Mr. Kolanz, finally, you used the 13 phrase evaluation sales in connection with two 14 entries on what has been marked as Exhibit 20, 15 the sales spreadsheet. Can you describe for the 16 jury what you mean by evaluation sales? 17 A. Well, evaluation sales are samples, or 18 samples of parts that would be provided to the 19 customer in an attempt, as I see it, to win the 20 business to try to sell to the customer those 21 parts. 22 Q. And with respect to those parts that 23 were sold as evaluation sales, I believe you 24 described them as something on the order of</p>

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1 three-inch discs; is that correct?
2 A. And looking at the spec for those, they
3 were a three-inch disc by about an eighth inch
4 thick.
5 Q. And is the spec you looked at, was that
6 the spec that was made an exhibit to the
7 Chartier deposition?
8 A. Yes.
9 Q. Other than the evaluation sales that
10 you --- well, strike that.
11 Based on your review of the records,
12 does it appear that the products sold as
13 evaluation sales were ever sold in production
14 quantities to Raytheon?
15 A. It does not appear --- I didn't find
16 anything in the record that indicated that that
17 material was sent --- or sold in production
18 quantities. In fact, that material appears to
19 have gone back and forth a few times in trying
20 to qualify itself, and failed to qualify as a
21 viable part.
22 ATTORNEY FAXON:
23 Okay. Thank you very much, Mr.
24 Kolan.

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1 VIDEOGRAPHER:
2 5:48 p.m., off record.
3 OFF VIDEO
4 ATTORNEY FAXON:
5 To the extent that you change
6 your mind and close the deposition, we will
7 reserve signature.
8 ATTORNEY HONIK:
9 Okay.
10 * * * * *
11 DEPOSITION CONCLUDED AT 5:48 P.M.
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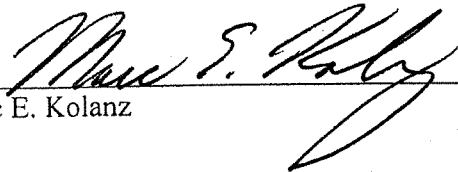
Pg./Line	Change	Reason
16:2	"them" to "the . . ."	transcription error
22:2	Youngblot to Youngblut	spelling error
39:1	Freemont to Fremont	spelling error
40:7	add "what" "understand <u>what</u> it"	transcription error
41:15	add "beginning in 1984," so that the answer reads "Sell beryllium oxide to Raytheon <u>beginning in 1984.</u> "	more precise answer
49:13-17	Change to "Yes. Brush's records indicate MSDS were sent before HAZCOM went into effect."	correct answer
52:6	Teresa Helman to Theresa Haumann	spelling error
56:19	"on a" to "zone"	transcription error
59:2-4	change to "The ceramic study was sent to Raytheon."	correct answer, as reflected in later testimony
62:18	"there's" to "there are"	grammar
71:4	"here" should be "there"	grammar/transcription
73:5-6	change "what they did with these parts, I don't know" – "we didn't have access to see what processes were being performed"	more precise response
88-89	Newbery Port to Newburyport	spelling
93:22	"white" to "while"	transcription error
94:22	"filmmaking" to "pillmaking"	transcription error
103:14	Add to end of answer "As I understand that term was used to describe the products Mrs. Genereux worked with – no."	Clarify answer depending on counsel's intended use of the word "window."

Pg./Line	Change	Reason
106:21-23	Add to end of answer "As I understand that term was used to describe the products Mrs. Genereux worked with – no."	Clarify answer depending on counsel's intended use of the word "window."
109:12	Change to "I don't know."	Reviewed many drawing and sales records, but don't know whether they were exhibits or not.
109:15	Change to "I don't know."	Reviewed many drawing and sales records, but don't know whether they were exhibits or not.
117	Add at end "As I understand that term was used to describe the products Mrs. Genereux worked with – no."	Clarify answer depending on counsel's intended use of the term "window."
117:18-21	Add at end, "There were evaluation samples which were apparently tested as windows on microwave tubes, but the records indicate that Raytheon rejected those parts and returned them, and that they were never sold in production quantities."	Clarify answer consistent with testimony later in my deposition.
118:2	Change to "Not with respect to the sheet. I did review sales documents and speak to current and former Brush employees."	correct answer
118:24	Change "Over the break" to "Before the break"	transcription error or mistake
120:17-20	Insert "whole." "I didn't read the <u>whole</u> deposition."	As the rest of the answer reflects, I did review parts of it.
122:11-16	"Sales documents indicate that small quantities of three inch disks and one-and-a-half inch disks were sent as evaluation samples to Raytheon. These evaluation samples failed to pass inspections by Raytheon and were generally	clarify and correct answer

Pg./Line	Change	Reason
	returned. They were never sold in production quantities.”	
122:21-24	Change “the one woman” to “Clare Balient” and add at end “but the parts she was describing were not sold by Brush Wellman.”	
123:7	Add “it,” “putting <u>it</u> in there”	add word, grammar/transcription
127:2	Change “Well” to “We”	transcription/grammar error
133:3	Add “an” - “was <u>an</u> ”	transcription/grammar error
158:7	“compliant” to “compliance”	transcription error
168:17	“bedding” to “vetting”	transcription error
170:15	Add “I was aware of Shima’s papers but concluded that the information was not credible” after “Yes.”	Clarify question that I was answering.
182:18	delete “thus”	extra word
182:24	Add “for subclinical disease” after “Yes.”	clarify answer
210:5	Add “that’s when we learned of and relayed the results of Kriess’s study” after “Yes.”	Clarify question was answering.
226:2	Add “1985 document” after “this”	Clarify what document is being discussed.
245:13	Add “in production quantities. I did see a memo that described evaluation samples that were returned after testing by Raytheon when Brush was attempting to qualify as a supplier.”	clarify answer
250:19	“pool” to “pull”	transcription error
255:17	Delete “and its use”	transcription/grammar error

Pg./Line	Change	Reason
286:9	"I" to "It"	transcription error

The foregoing reflect my changes and corrections to my deposition in *Genereux, et al. v. America Beryllia Corp., et al.*



Marc E. Kolanz

MEMO TO FILE: [REDACTED], Waltham, MA

FROM: Greg Chesmar

SUBJECT: Visit of November 18, 1987

PERSONNEL CONTACTED: John Chartier, Purchasing Manager
 Dr. Beverly Shaw, Manager, Materials Engineering
 Dr. Peter Toch, Materials Engineer
 Tony Fragala, Materials Engineer
 Phyllis Grimaldi, B-W Tucson

We discussed a failure that occurred on the CFA windows that is a D-M02-3000-180. We delivered 10 pieces to them about August, 1987. They built 2 pieces into an assembly and both pieces failed hermeticity. At the present time, they do not know the exact cause of failure or the exact location, except it is near the edge of the disc and probably at the metalization ceramic interface. They should have the failure analysis complete by November 30, 1987.

I asked him to send either a piece of the disk from near the failure or a mounted piece to the attention of Kirin Dilal at Cleveland.

They brazed the disc into the copper ring and the ring wall thickness is approximately .010 inches thick where it contacts the ceramic.

This item was to have been made with the high strength ceramic and metalization system.

Note to Phyllis: Please advise me of the part numbers and the order numbers for this item. Also, request QC to verify that the ceramic and MZ system was the high strength type.

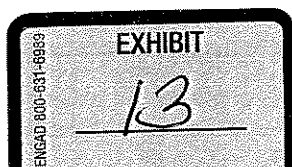
If necessary, Shaw will give us an unused piece for analysis.

This item goes through various braze cycles. The first braze cycle is 980 C, the second is 820 C and the third is 780 C. Time at temperature is approximately 5 minutes. It then goes thru a 24-48 hour 500 C vacuum bake out. Then an electrical test where approximately 10 KW RF is passed through the window.

During this test, the part heats up to approximately 100° C. with the center of the window being about 10 C warmer than the edges.

Shaw wants to know if the the dissipation factor or thermal conductivity will be different for high strength material. I advised him, to the best of our knowledge, it will not. I told him the electrical properties and the physical properties will be the same. He questioned if the grain boundary properties might affect these two items.

Shaw is going to submit a small order, perhaps 25 to 50 pieces, for the AMRAM RF windows. These parts must be made with the high strength ceramic and metalization.



BW-GEN 03254

RAYTHEON MPT

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We discussed our order TU1586 with John Chartier, drawing #811570, R-75-2730. He is becoming disgusted with our inability to ship. We are going to lose their rod business very soon if we cannot ship on time. He is in the process of qualifying a second source. We should be able to do the grinding business if nothing else, but this will affect our metalization business here also.

Shaw said the Raytheon VHSIC package will be AlN, 200 leads on 2 sides on .010 in. centers.

We are in the process of shooting ourselves in the foot by our inability to make a simple rod.

GC/ab

cc: Lyn Doran, Tucson, AZ
Master File

BW-GEN 03255